

REMARKS

The Office rejects claims 1-14 in the subject application. Applicant cancels claim 14 and adds new claim 15. For example, support for claim 15 can be found at page 1, lines 4-6 of the present application.

Claims 1-12 and 15 (3 independent claims; 13 total claims) remain pending in the application. Support for any amendments may be found in the originally filed specification, claims, and figures. No new matter has been introduced by these amendments. Reconsideration of this application is respectfully requested.

35 U.S.C. § 103 REJECTIONS

Saito in view of Oprescu

The Office rejects claims 1, 3-8, and 10-13 under 35 USC §103(a) as allegedly being unpatentable over Saito¹ in view of Oprescu². Applicant had cancelled claim 13 in the prior Response to Office Action, so that the rejection of claim 13 is moot. Applicant respectfully traverses the rejection.

Saito discloses a power control system having an external power line 107, a circuit breaker apparatus 101, a power line 102, and electric apparatuses such as an iron 104, an air-conditioner 105, and an electronic oven 106. The electronic apparatuses receive power from the electric power company over external power line 107.³ Breaker 101 monitors the power consumption, so that it does not exceed a predetermined value. If the power consumption exceeds the predetermined value, breaker 101 stops the power supply, keeps a log of the power consumption, and responds to power use permission requests from the electronic apparatuses.⁴

Oprescu discloses a power management system for an interconnection bus for computer devices. The Oprescu system maintains the total power draw of the computer devices in an acceptable range. The devices use a limited amount of power. The system can activate various power supply devices (which are off-line) in order to increase the amount of power available.⁵ This system receives power requests from the computer devices and coordinates the supply of the power to these devices. If insufficient power is available to satisfy the power requests, the

¹ U.S. Patent No. 6,018,690, issued January 25, 2000.

² U.S. Patent No. 5,752,046, issued May 12, 1998.

³ Saito, column 6, lines 8-10.

⁴ Saito, column 5, lines 45-64.

⁵ Oprescu, Abstract.

Oprescu system increases the power supplied to the power line to a maximum amount while keeping the total amount of power used by the devices less than or equal to the maximum amount. Thus, the Oprescu system can grant and revoke power requests based on priority in order to keep the total power used at less than or equal to the original maximum amount.⁶

But Saito in view of Oprescu fails to teach, advise, or suggest “a power generation apparatus capable of varying an amount of power generation” as recited in claims 1 and 12 (and claims 2-11 and 15, which variously depend from claim 1). Contrary to the claimed invention, breaker 101 in Saito prevents the power consumption from exceeding the predetermined value, so that the Saito system cannot vary the amount of power consumption. More specifically, if a request is made to exceed the maximum amount of power allowed (M), a power consumption controller 306 rejects the request to use the power and prevents its use.⁷ Accordingly, Saito teaches away from the claimed invention in that Saito has a predetermined value of power that cannot be varied. Regardless, Saito monitors power “consumption”, but fails to address power “generation”, which is through the external electric company. Moreover, Saito’s teachings go against “a power generation apparatus capable of varying an amount of power generation” as recited in claims 1 and 12.

Furthermore, Oprescu does not make up for the shortcomings of Saito. Oprescu can increase the power supplied to the power line, if there is insufficient power available to satisfy the power requests. But Oprescu can only increase the power supplied to less than or equal to the original maximum amount. Oprescu prioritizes the power requests in order to grant or revoke these power requests, so that the total power used is less than or equal to the maximum amount. In other words, Oprescu redistributes the original maximum amount of power, but does not vary an amount of power generation as recited in claims 1 and 12. Thus, Saito in view of Oprescu fails to teach, advise, or suggest “a power generation apparatus capable of varying an amount of power generation” as recited in claims 1 and 12.

Moreover, Saito in view of Oprescu further fails to teach, advise, or suggest “the power generation apparatus increases or decreases the amount of power generation so as to match the amount of power generation with a target amount of power generation which is determined in accordance with the second power request signal” as recited in claim 1 (and claims 2-11 and 15, which variously depend from claim 1). As discussed above, Saito only permits a predetermined

⁶ Oprescu, column 15, lines 1-20.

amount of power consumption. Oprescu does not increase or decrease the amount of power generation so as to match the amount of power generation with a target amount, because Oprescu is limited to the original (predetermined) maximum amount of power. Even though Oprescu redistributes the original maximum amount of power, it does not increase or decrease the amount of power generation so as to match the amount of power generation with a target amount as recited in claim 1.

Saito in view of Oprescu also fails to teach, advise, or suggest “a power control apparatus for controlling power supply from the power generation apparatus to the plurality of electric products” as recited in claims 1 and 12 (and claims 2-11 and 15, which variously depend from claim 1). Since Saito only permits a predetermined amount of power consumption and Oprescu merely redistributes the original maximum amount of power, each reference teaches against controlling power supply from the power generation apparatus to the plurality of electric products as recited in claims 1 and 12. Moreover, Saito and Oprescu obtain their power from an external electric company, so that neither reference deals with power generation as recited in the claimed invention.

Still further, Saito is geared toward monitoring power consumption to prevent the power consumption from exceeding a predetermined value. On the other hand, Oprescu is geared toward accommodating power requests above and beyond the original maximum amount of permitted power use. In this respect, Saito teaches away from Oprescu, because power requests above the predetermined value in Saito would trip the circuit breaker into cutting off the power supply. Thus, modifying Saito to include this feature of Oprescu would make Saito inoperable for its intended use, namely to prevent cutting off the power supply.

Thus, because Saito in view of Oprescu fails to teach, advise, or suggest one or more of the claimed elements, and furthermore, combining these references would make Saito inoperable for its intended use, claims 1, 3-8, and 10-13 (and to the extent applicable claim 15) are patentable over Saito in view of Oprescu. Applicant respectfully requests withdrawal of this rejection.

⁷ Saito, column 8, lines 51-56.

Saito and Oprescu in further view of Wills

The Office rejects claims 2 and 9 under 35 USC §103(a) as allegedly being unpatentable over Saito and Oprescu as applied to claims 1 and 6 and further in view of Wills⁸. Applicant respectfully traverses the rejection.

Wills discloses an apparatus for distributed power generation to protect against island situations. The Wills system detects variations in voltage and frequency of an electric distribution grid and changes the output power accordingly.⁹

In view of the forgoing discussion in connection with claim 1 (from which claims 2 and 9 variously depend), claims 2 and 9 are patentable over Saito and Oprescu as applied to claims 1 and 6 and further in view of Wills. Accordingly, Saito and Oprescu as applied to claims 1 and 6 and further in view of Wills fails to teach, advise, or suggest “the power generation apparatus is a fuel cell” as recited in claim 2 and “the power supply source is a storage cell” as recited in claim 9.

Moreover, Wills can change the output power based on the grid fluctuations, which teaches against Saito. Modifying Saito to include this feature of Wills would make Saito inoperable for its intended use, , namely to prevent cutting off the power supply due to power demands above the predetermined value.

Thus, claims 2 and 9 are patentable over Saito and Oprescu as applied to claims 1 and 6 and further in view of Wills, and Applicant respectfully requests withdrawal of this rejection.

Saito and Oprescu in further view of Wills

The Office rejects claim 14 under 35 USC §103(a) as allegedly being unpatentable over Saito and Oprescu as applied to claims 1 and 6 and further in view of Perkowski¹⁰.

Since claim 14 has been cancelled, this rejection is moot. Applicant respectfully requests withdrawal of this rejection.

⁸ U.S. Patent No. 6,219,623, issued April 17, 2001.

⁹ Wills, Abstract.

¹⁰ U.S. Patent No. 6,625,581, issued September 23, 2003.

CONCLUSION

Thus, the Applicant respectfully submits that the present application is in condition for allowance. Reconsideration of the application is thus requested. Applicant invites the Office to telephone the undersigned if he or she has any questions whatsoever regarding this Response or the present application in general.

Respectfully submitted,

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